

rest must not necessarily precede re-stimulation. Although peripheral fatigue of the nerve-terminals may be readily induced in the spleen it does not nullify the results of these experiments. Stimulative fatigue can be induced in vasomotor nerves, but not in the nerves of the spleen. The transmission of nerve impulses is not barred by stimulation fatigue.

JELLIFFE.

PLEA FOR SIMPLER MEDICINAL TREATMENT OF CHRONIC NERVOUS DISEASE.

JOSEPH COLLINS (Med. News, July 5, 1902).

This writer believes in the proper use of medicine, but calls attention to its frequent abuse. He is of the opinion that in many cases, such as neurasthenia, drugs should only be used to fulfil some pointed indication and substitutes for them exercise, rest, diet, conformation to the rules of health, avoidance of deleterious influences, with massage and hydrotherapy. Epilepsy is best treated by avoiding those experiences which have been shown to precipitate attacks, and putting the system in such a condition that the excitants of epileptic seizures, such as fatigue, autointoxications from the gastrointestinal tract and poisonous products, may be stayed by dieting, attention to the best hygienic measures, massage, suspension, electricity and hydrotherapy, and the patient should be assured that by attention to these measures the approach of incapacity which must eventually overtake him may be retarded for an extended period.

W. B. NOYES.

NEUROSES AS SEEN IN ORTHOPEDIC PRACTICE. B. E. MCKENZIE, M.D. (N. Y. Med. Jour., July 13, 1902).

Orthopedic practice includes many neuroses of the spine, where no changes in the central or peripheral nerve structures can be discovered. The neurosis may not be the only, and possibly not the chief disease present. After treating any abnormal condition the writer finds that discipline which educates the patient to be self-reliant must be enforced, and systematic gymnastic exercise carried on. The writer's cases present a large variety of these conditions. *Case I*, complaining of pain in the back and head, and inability to exert herself for many months, was cured by isolation from her family and systematic gymnastics. *Case II*, suffering for several years from backache, and symptoms of hip disease, was cured in a short time by gymnasium training, the entire trouble being hysteria. Other cases presented symptoms resembling Pott's disease, multiple neuritis with severe contractures, lateral curvature of the spine with great weakness, joint disease of various sorts. They all recovered under treatment isolating them from their families and instituting carefully selected physical exercises in a gymnasium under a competent instructor, preferably in classes. This treatment is a substitution or modification of the Weir Mitchell system of treatment.

W. B. NOYES.

THE CHANGES IN THE SPINAL CORD AND MEDULLA IN PERNICIOUS ANEMIA. FRANK BILLINGS, M.D. (Boston Med. and Surg. Jour., Aug. 28, 1902).

The writer discusses the characteristic changes in the spinal cord in pernicious anemia, and their resemblance to other conditions of diffuse degeneration. The cause of pernicious anemia is inferred to be toxemia, occurring after pregnancy, syphilis, malaria and fevers, as a rule associated with disorders of the digestive tract. The symptoms are chiefly due to the profound anemia. There are present nervous phenomena, usually subjective, and paresthesia, cerebral disturbance, fixation of the pupils and other nervous phenomena are observed. Spinal cord lesions,

occurring in a small percentage of the cases may appear as one of the earliest manifestations of the disease. Of the author's thirty-six cases paresthesia was noted early in the history, appearing simultaneously in feet and hands. Functional nervous disorder was noted in twenty-four cases. In ten cases a spastic and usually an ataxic condition more or less progressive was noted. In three cases complete flaccid paraplegia with loss of knee-jerk and voluntary bowel and bladder control appeared. Girdle sensation was present in the spastic cases contrary to the usual teaching. In three cases there were pathological changes in the cord with a slight sclerosis or degeneration in the lateral and posterior columns of varying intensity and location. There was no marked degeneration of the gray matter of the root zone, of the root ganglia, and of the brain cortex. The degeneration varied at different heights of the cord. It appeared in one case as a focal degeneration, varying decidedly at different heights, not involving a whole system centrifugally or centripetally. It is apt to diffuse itself from one tract to another, but involves the spinal gray as a rule. The whole nerve is not involved. There are two kinds of degenerative processes—an acute, where the nerve sheath becomes swollen, stretched and filled with debris, but not usually associated with an increase of the neuroglia. These lesions of the spinal cord have been attributed to multiple hemorrhages, thickening of the walls of the blood vessels, acute myelitis, primary changes in the gray matter, to anemia, or to a toxic agent. The writer's conclusions are as follows: (1) That there is a well-established relation of diffuse cord degeneration with pernicious anemia. (2) It seems highly probable that the hemolysis and the cord changes are due to the same toxin. (3) While the source of the toxin is unknown the fact that gastro-intestinal disturbance is so common in the disease would lead one to suppose that it is intestinal in origin. (4) The diffuse degeneration of the spinal cord which occurs in conditions without pernicious anemia, does not appear to differ essentially from those of pernicious anemia. (5) It is possible that a common toxin exists as a blood circulating poison in one individual, acts upon the nervous apparatus in another, and coincidentally upon the blood and spinal cord in others.

W. B. NOYES.

THE NERVES OF THE HEART. HORACE H. HOPPE, M.D. (Jour. Amer. Med. Assn., May 24, 1902).

A nervous affection of the heart is caused by a faulty condition of the nervous system locally in the heart, the nerves leading to the heart, their center in the medulla, or by a derangement of the nervous system as a whole, as in neurasthenia and hysteria. While the heart is rich in sensory fibers and ganglionic cells, there are no motor fibers nor motor centers. The teaching of the action of the vagus and sympathetic has been modified. The motor stimulus comes from the blood itself. The rhythm of the heart action is automatic, but it can be diminished by influences, chemical, physical or psychical in character, coming either through the sympathetic nerve, or from the vagus. The three kinds of neurosis of the heart are: (1) neurasthenia cordis; (2) tachycardia; and (3) bradycardia. Of neurasthenia cordis we have (a) typical neurasthenia of the heart; (b) arrhythmia of the heart; (c) pseudo-angina pectoris; (d) nervous bruit. The first has besides ordinary neurasthenic symptoms, cardiac hypochondria or fear of heart disease based on local precordial sensations, produced by palpitation, irregularities or pain. Fear is a predominant psychic element here as in other forms of neurasthenia. Palpitation is frequent, due to chemical or mechanical conditions of the stomach. It is often associated with a severe sense of constriction of the throat, or dysphonia. The typical neurasthenic heart is